Testbed Roundup

The NWS Operations Proving Ground

Kim Runk

Abstract

The National Weather Service (NWS) is committed to evolving toward an operating model that focuses on the unique strengths it brings to the weather enterprise, and characterized by greater agility in adapting to changes in technology and communication. As part of the infrastructure needed to reach that objective, the NWS expanded the network of NOAA-affiliated testbeds in 2012, establishing an Operations Proving Ground (OPG) in Kansas City, Missouri. The OPG serves as a framework for advancing two important components of the Weather Ready Nation (WRN) Roadmap: 1) transitioning new science and technology into operations, and 2) building capacity for superior decision support services (DSS). Collaboration among participating testbed operations is critical to the process of transitioning new capabilities from the research community into operations, both from the standpoint of managing a streamlined, efficient process; and for the purposes of ensuring progress is achieved in a restricted budget climate. Fostering those collegial, collaborative relationships has already proven instrumental to the success of early OPG experiments, such as the implementation of the GOES-R Fog and Low Stratus (FLS) suite of products into NWS operations in 2013. In the fall of 2013, the OPG completed its systems configuration to prepare for conducting formal Operational Readiness Evaluations (OREs). These sessions are designed to ensure that promising new tools and decision aids emerging from test beds are not only endorsed by forecasters as useful to the forecast process, but that they also present no adverse impacts on human factors, such as workflow, workload, cognitive assimilation, situational awareness, risk communication, and other forecast decisions. The ORE model allows forecasters to assess these issues in the context of a full production cycle, within a realistic, but controlled setting. The service enhancement arm of the OPG mission focuses on projects aimed at improving the communication of hazards and impacts. This allows core partners to understand threats and vulnerabilities more clearly, enabling them to make better risk management decisions. Initiatives in this category include hosting and executing the DSS Deployment Boot Camp, and providing support for the Impact-Based Warnings Demonstration and the Winter Hazard Simplification Experiment. The DSS Boot Camp is a highly interactive workshop, during which forecasters learn and practice skill sets needed to provide effective on-site emergency response support, either at a disaster incident, or in the emergency operations center (EOC) for a planned, large-venue event. New R2O activities being planned for the OPG in the coming year include ORE sessions to validate new satellite-based decision aids, an integrated flood warning tool, and an experimental bulleted tropical cyclone message known as the TCV. Risk communications experts were employed to develop the format and language used in this product. For the post-demonstration evaluation process, the new format will be assessed for improvement in clarity and usability of the messaging for decision making by emergency managers, as well as social scientists with expertise in the areas of communication and behavioral psychology.